

DESCRIPTION

The work shall consist of furnishing and applying a membrane waterproofing system consisting of membrane primer and waterproof membrane applied to the surface of the precast concrete structure walls as shown on the Contract Plans.

The work shall include the preparation of concrete surfaces. The CONTRACTOR shall select, furnish and apply one of the membrane waterproofing systems included in this specification.

The CONTRACTOR has the option of using any one of the membrane waterproofing systems included in this specification, as desired. Only a single system may be used on the structure, regardless of the length or design of that structure. No system may be substituted for any system which is already in any stage of installation.

MATERIAL

The membrane system shall be one of the following:

1. Bituthene 5000 Preformed System - shall consist of Bituthene Primer, Heavy Duty Bituthene Membrane, and Bituthene Mastic P-3000 Primer; all as manufactured by WR Grace and Company, Cambridge, Massachusetts.
2. Perma Quik 6100 Flexible Waterproofing and Roofing Membrane, including PQ2047/2063 butyl reinforcement at joints and PQ2550 Protection Board over the entire deck membrane surface; all as manufactured by PermaQuik, Inc., Williamsville, NY .

CONSTRUCTION DETAILS

The membrane waterproofing system shall be installed in accordance with the membrane manufacturer's instructions and where shown on the Contract Plans.

Protect all materials from rain and physical damage and provide adequate ventilation. Membranes shall be stored where temperatures will not exceed 32°C for extended periods.

On new structural slabs, the minimum curing period as set forth in NYSDOT Standard Specifications, Section 555-3.09 Curing, latest revision, shall be met prior to membrane system placement.

Work shall not be done during wet weather conditions nor when atmospheric conditions are such that unsatisfactory results will be produced. The ENGINEER shall be the sole determiner of favorable atmospheric conditions. No work shall be done when the concrete structural slab surface temperature is below 10°C, or ambient temperatures are below 10°C. The concrete structural slab shall be surface dry at the time of application of the membrane waterproofing system.

All concrete surfaces shall be smooth, monolithic and free of voids, spalled areas, loose aggregate and sharp protrusions and contain no visible coarse aggregate. Cure concrete with clear, resin based curing compounds containing no oil, wax, or pigment. Concrete shall be allowed to dry thoroughly following rain.

All joints shall be sealed with waterstop, joint filler and sealant as required. Prestrip all slab and wall cracks over 1.6 mm width and all construction and control joints with 229 mm wide membrane.

For horizontal surfaces apply membrane from the low point to the high point so that laps shed water. Overlap all seams at least 64 mm and stagger all end laps. Roll the entire membrane firmly and completely as soon as possible with a linoleum roller or standard waterfilled garden roller less than 762 mm wide, weighing a minimum of 34 kilograms when filled. Cover the face of the roller with a resilient material such as 13 mm plastic foam or two wraps of indoor-outdoor carpet to allow the membrane to fully contact the primed substrate. Should any part of the membrane be damaged during the rolling process, such material shall be removed and replaced with new membrane at the CONTRACTOR's expense.

METHOD OF MEASUREMENT

The quantity to be measured for waterproof membrane shall be the number of square meters (area) installed in the completed work.

BASIS OF PAYMENT

The quantity to be paid for shall be the number of square meters of membrane incorporated in the work. The unit price bid shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.

Payment will be made under:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
559.50M	Membrane Waterproofing System	SM